

April 1989

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

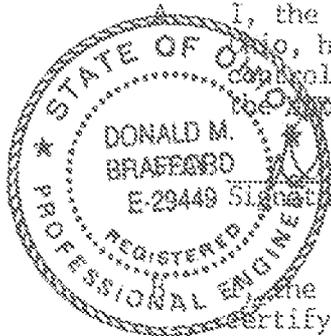
CERTIFICATION 1

CERTIFICATION OF SEDIMENT CONTROL SYSTEM CONSTRUCTION

Permittee's Name AMERICAN ENERGY CORPORATION Permit D-0425

Complete both certification statements listed below.

I, the undersigned, a surveyor or engineer registered in the State of Ohio, hereby certify that the measurements of the constructed sediment control system described below conform to the measurements contained in the ~~XXXXXXXXXXXX~~ "as built"* (specify one) design plan.

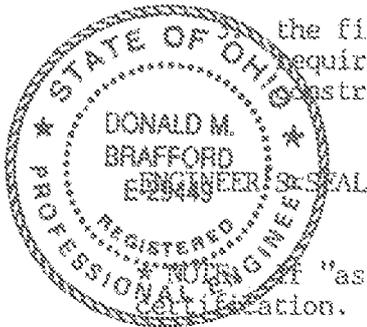


Donald M. Brafford Signature Title PE Date 8-12-02
(engineer/surveyor)

I, the undersigned, an engineer registered in the State of Ohio, hereby certify that the sediment control system described below has been constructed per the ~~XXXXXXXXXXXX~~ "as built"* (specify one) design specifications and criteria and that:

1. the embankment foundation area was cleared of all organic matter and the entire foundation surface scarified;
2. the fill material was free of sod, large roots, other large vegetative matter, frozen soil, and coal processing waste; and

the fill was brought up in horizontal layers of such thickness as required to facilitate compaction in accordance with prudent construction standards.



Donald M. Brafford Signature Date 8-12-02

If "as built", then "as built" plans must be attached to this certification.

This sediment control system consists of:

Sediment Ponds No. 1-5, _____, _____, _____
Diversions (describe in relation to pond numbers)

Other control methods (describe if different from permit descriptions)

OHIO DEPARTMENT OF NATURAL RESOURCES
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ATTACHMENT 20
(SEDIMENTATION POND/IMPOUNDMENT DATA SHEET)

Applicant's Name AMERICAN ENERGY CORPORATION Pond # AS-BUILT 1-S

Type of impoundment EKCAVATED Permanent _____ Temporary X

1. POND DRAINAGE AREA DATA:

- a) Drainage area 6.9 acres
 b) Disturbed area 6.9 acres
 c) Ave. land slope 20 %
 d) Hydrologic soil group C
 e) Hydraulic length 100 ft.
 f) Cover/condition of the undisturbed area N/A

2. DESIGN STORM CRITERIA:

a) Method:

- 1) Design method (s) including computer programs: SEDCAD 4.0
 2) SCS curve number 86

b) Rainfall Amount/Peak Flow	Rainfall, in.	Peak flow, cfs.
1) 10 year, 24 hour =	<u>3.7</u>	<u>16</u>
2) 25 year, 24 hour =	<u>4.3</u>	<u>19</u>
3) 50 year, 6 hour = (if permanent)	_____	_____
4) 100 year, 6 hour = (if 20/20 size)	_____	_____

3. POND SIZE:

a) Dimensions: N/A

- 1) Dam height 3 ft. 4) Dam downstream slope 25 % (MAX)
 2) Dam width 10 ft. (MIN) 5) Dam upstream slope 30 % (MAX)
 3) Dam length 300 ft. 6) Core length 370 ft. 10 ft. 4 ft.

b) Sediment storage volume 15.12 ac. ft. is provided below the 855.5 foot elevation.

c) Stage/Area Data:	Elevation ft.	Surface Area ac.	Volume ac. ft.
1) Bottom of pond	<u>845.0</u>	<u>0.05</u>	<u>0</u>
2) Streambed at upstream toe:	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
3) Principal spillway inlet:	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
4) Exit Channel Crest:	<u>855.5</u>	<u>2.54</u>	<u>15.12</u>
5) Top of embankment:	<u>857.0</u>	<u>2.69</u>	<u>19.16</u>

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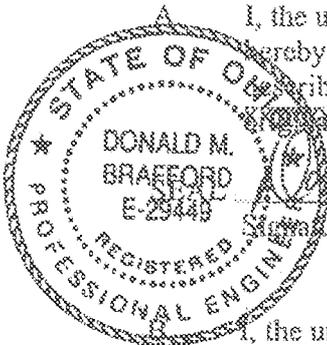
OHIO DEPARTMENT OF NATURAL RESOURCES
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CERTIFICATION 2

CERTIFICATION OF IMPOUNDMENT CONSTRUCTION

Permittee's Name AMERICAN ENERGY CORPORATION Permit D-0425

Complete both certification statements listed below.



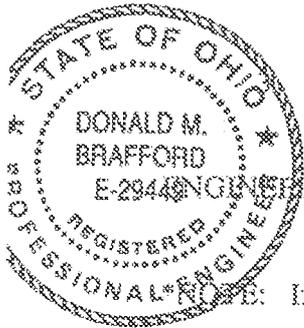
I, the undersigned, a surveyor or engineer registered in the State of Ohio, hereby certify that the measurements of the constructed impoundment described below conform to the measurements contained in the ~~approved~~ approved "as built" (specify one) design plan.

Donald M. Brafford P.E. 8-12-02
Signature Title Date
(engineer/surveyor)

I, the undersigned, an engineer registered in the State of Ohio, hereby certify that the impoundment described below has been constructed per the ~~approved~~ approved "as built" (specify one) design specifications and criteria and that:

1. the embankment foundation area was cleared of all organic matter and the entire foundation surface scarified;
2. the fill material was free of sod, large roots, other large vegetative matter, frozen soil, and coal processing waste; and

the fill was brought up in horizontal layers of such thickness as required to facilitate compaction in accordance with prudent construction standards.



Donald M. Brafford 8-12-02
Signature Date

NOTE: If "as built," then "as built" plan must be attached to this certification.

Impoundment no. 2-S

Type of Impoundment FRESHWATER

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ATTACHMENT 20
(SEDIMENTATION POND/IMPOUNDMENT DATA SHEET)

Applicant's Name AMERICAN ENERGY CORPORATION Pond # AS-BUILT 2-S

Type of impoundment FRESHWATER * Permanent _____ Temporary X

1. POND DRAINAGE AREA DATA:

- a) Drainage area 1.8 acres
 b) Disturbed area 1.8 acres
 c) Ave. land slope 20 %
 d) Hydrologic soil group C
 e) Hydraulic length 300 ft.
 f) Cover/condition of the undisturbed area N/A

2. DESIGN STORM CRITERIA:

a) Method:

- 1) Design method (s) including computer programs: SEDCAD 4.0
 2) SCS curve number 86

b) Rainfall Amount/Peak Flow	Rainfall, in.	Peak flow, cfs.
1) 10 year, 24 hour =	_____	_____
2) 25 year, 6 hour =	<u>3.3</u>	<u>5</u>
3) 50 year, 6 hour = (if permanent)	_____	_____
4) 100 year, 6 hour = (if 20/20 size)	_____	_____

3. POND SIZE:

a) Dimensions: N/A

- | | |
|---------------------------------|--|
| 1) Dam height <u>8.5</u> ft. | 4) Dam downstream slope <u>43</u> % (MAX) |
| 2) Dam width <u>6</u> ft. (MIN) | 5) Dam upstream slope <u>32</u> % (MAX) |
| 3) Dam length <u>160</u> ft. | 6) Core length <u>160</u> ft. <u>10</u> ft. <u>4</u> ft. |

b) Sediment storage volume 0.84 ac. ft. is provided below the 972.2 foot elevation.

c) Stage/Area Data:	Elevation ft.	Surface Area ac.	Volume ac. ft.
1) Bottom of pond	<u>965.0</u>	<u>0.07</u>	<u>0</u>
2) Streambed at upstream toe:	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
3) Principal spillway inlet:	<u>872.2</u>	<u>0.18</u>	<u>0.84</u>
4) Exit Channel Crest:	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
5) Top of embankment:	<u>873.5</u>	<u>0.22</u>	<u>1.10</u>

4. PRINCIPAL SPILLWAY:

- a) Pipe length 177 ft.
- b) Pipe diameter 20 in.
- c) Pipe slope 8.9 %
- d) Riser diameter N/A in.
- e) Riser height N/A ft.
- f) Type of pipe ELASTIC
- g) Number of anti-seep collars spacing along pipe ft.
- h) Does the design include a trash rack? Yes, No.
- i) Does the design include an anti-vortex device? Yes, No.

5. EMERGENCY SPILLWAY/EXIT CHANNEL: N/A

- a) Base width ft.
- b) Design flow depth ft. Depth in level section ft.
- c) Exit slope %
- d) Exit velocity fps
- e) Channel lining
- f) Side slopes
- g) Freeboard ft.
- h) Entrance slope %
- i) Length of level section ft.

6. The minimum static factor of safety for this impoundment is 1.5

7. Provide as an addendum to this attachment a detailed plan view or 2 cross sections of the impoundment.

8. Comments: * THIS IMPOUNDMENT IS PART OF THE MAKE-UP WATER SYSTEM FOR THE WASH PLANT.

9. Is this an MSHA structure? Yes, No. If "yes," provide the MSHA ID. number if one has been assigned

10. If this is to be retained as a permanent impoundment, submit an addendum to this attachment demonstrating compliance with rule 1501:13-9-04(H) (2) of the Administrative Code.

11. I hereby certify that this impoundment is designed to comply with the applicable requirements of rule 1501:13-9-04 of the Administrative Code using current, prudent engineering practices.

Donald M. Brafford
Signature

8-12-02
Date

